

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	1	"20040180999".pn.	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 09:53
S2	9	("3047608" "3205250" "3281381" "4206103" "4290976" "6362260").PN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 09:16
S3	71	STEVENSON-DONALD\$.in. or NGUYEN-DUONG\$.in. or HARR-MARK\$.in. or JAKUPCA-MICHAEL\$.in.	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 09:18
S4	11	DOVER CHEMICAL CORPORATION.as.	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 12:41
S5	530	524/115.ccls.	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 14:03
S6	11	("3047608" "3205250" "3281381" "4206103" "4290976" "4739000").PN. OR ("6362260").URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 12:22
S7	3	S6 not S2	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 12:23
S8	52	("2564646" "3281381" "3558537" "3755200" "3928267" "3931364" "3943081" "3998782" "4116926" "4125501" "4134868" "4159261" "4159973" "4174297" "4206103" "4244848" "4282141" "4310429" "4333868" "4340514" "4346025" "4402858" "4601839" "4614756" "4661544" "4751118" "4782170" "5120783" "5283273" "5364895" "5374377" "5414030" "5519076" "5519077" "5532401" "5534566" "5714095" "5814691" "5880189" "5889095" "5969015" "6013703" "6022946" "6046263" "6103796" "6136900" "6180700" "6362260" "H000506").PN. OR ("6824711").URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 12:38
S9	48	S8 not S6 not S2	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 12:39
S10	7	S4 and phosphite	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 12:41
S11	6	S10 not S2	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 13:50
S12	12	S3 and phosphite	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 13:50
S13	7	S12 not S11 not S10 not S2	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 14:03
S14	207	S5 and phosphite	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 14:03
S15	1	S5 and (phosphite near4 \$4cumyl)	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 14:04

EAST Search History

S16	31	S5 and (phosphite near4 \$3isodecyl)	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 14:04
S17	0	(558/70.ccls. or 558/70.ccls.) and (phosphite with \$5cumyl)	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 14:05
S18	51	(558/70.ccls. or 558/70.ccls.) and (phosphite)	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 14:16
S19	45	S18 and (aryl or phenyl or aromatic)	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 14:05
S20	9	(558/70.ccls. or 558/70.ccls.) and phosphite.ti.	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 14:17
S21	5	(558/70.ccls. or 558/70.ccls.) and phosphite.ab.	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 14:17
S22	10	S21 or S20	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 14:20
S23	236	(((\$5cumyl near2 phenyl) or \$5cumylphenyl) with phosphite	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 14:23
S24	86	S23 and (PVC or polyvinyl chloride)	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 14:54
S25	6	(((\$5cumyl near2 phenyl) or \$5cumylphenyl) with phosphite	EPO; JPO; DERWENT	ADJ	ON	2006/06/26 14:51
S26	128	S23 and (propoxy or ethoxy)	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 14:47
S27	0	(\$5cumylphenoxyethyl or \$5cumylphenoxypropyl or (\$5cumylphenoxy ethyl) or (\$5cumylphenoxy propyl)) with phosphite	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 14:50
S28	0	(\$5cumylphenoxyethyl or \$5cumylphenoxypropyl or (\$5cumylphenoxy near2 ethyl) or (\$5cumylphenoxy near2 propyl)) with phosphite	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 14:52
S29	0	(((\$5cumyl near2 phenoxy) or \$5cumylphenoxy) with phosphite	EPO; JPO; DERWENT	ADJ	ON	2006/06/26 14:51
S30	1	ethoxy near3 \$5cumylphenyl	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 14:52
S31	8	S24 and (phosphite.ab. or phosphite.ti.)	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 14:54
S32	1	"20040183054".pn.	US-PGPUB; USPAT; USOCR	ADJ	ON	2006/06/26 15:21



STIC Search Report

EIC 1700

STIC Database Tracking Number: 193927

TO: Sandra Poulos
Location: REM10D18
Art Unit : 1714
June 27, 2006

Case Serial Number: 10/709578

From: Kathleen Fuller
Location: EIC 1700
REMSEN 4B28
Phone: 571/272-2505
Kathleen.Fuller@uspto.gov

Search Notes

I DID A BROAD SEARCH COVERING CLAIMS 1 AND 7 FINDING 132 STRUCTURES. I THEN SEARCHED FOR THE STRUCTURES OF CLAIM 4 , USING A RATHER BROAD VERSION OF THE 2 COMPOUNDS IN CLAIM 4. THERE WERE 20 ANSWERS BUT 18 OF THEM WERE POLYMERS AND NOT CORRECT. ONLY 2 ANSWERS WERE GOOD (THE COMPOUNDS OF CLAIM 4) AND THERE WAS ONLY ONE CA REFERENCE WHICH WAS TO THE APPLICANT.

I COMBINED THE 132 STRUCTURES WITH UTILITY AND THERE WERE 3 REFERENCES, ONE TO THE APPLICANT AND THE 2 OTHERS NOT USEFUL.

IF YOU HAVE ANY QUESTIONS PLEASE CALL ME.



STIC Search Results Feedback Form

EIC17000

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

- I am an examiner in Workgroup: Example: 1713
- Relevant prior art found, search results used as follows

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
(journal articles, conference proceedings, new product announcements etc.)

➤ Relevant prior art *not* found:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention

Comments:

193927

Fuller, Kathleen

From: SANDRA POULOS [sandra.poulos@uspto.gov]
Sent: Monday, June 26, 2006 10:12 AM
To: STIC-EIC1700
Subject: Database Search Request, Serial Number: 10/709,578

Requester:
SANDRA POULOS (P/1714)
Art Unit:
GROUP ART UNIT 1714
Employee Number:
81697
Office Location:
REM 10D18
Phone Number:
(571)272-6428
Mailbox Number:

Case serial number:
10/709,578
Class / Subclass(es):
524/115
Earliest Priority Filing Date:
5/14/04
Format preferred for results:
Paper
Search Topic Information:
Please search the chemical structures in Claims 1 and 7.
Special Instructions and Other Comments:

*Please copy Claims
from Edan. KF*

=> FILE REG
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STRUCTURE FILE UPDATES: 26 JUN 2006 HIGHEST RN 889573-50-6
DICTIONARY FILE UPDATES: 26 JUN 2006 HIGHEST RN 889573-50-6

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

Please note that search-term pricing does apply when
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*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

Structure search iteration limits have been increased. See HELP SLIMITS
for details.

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predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=> FILE HCAPLU
FILE 'HCAPLUS' ENTERED AT 10:49:25 ON 27 JUN 2006
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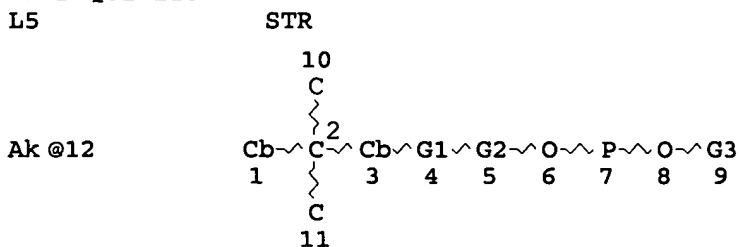
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FILE COVERS 1907 - 27 Jun 2006 VOL 145 ISS 1
FILE LAST UPDATED: 26 Jun 2006 (20060626/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

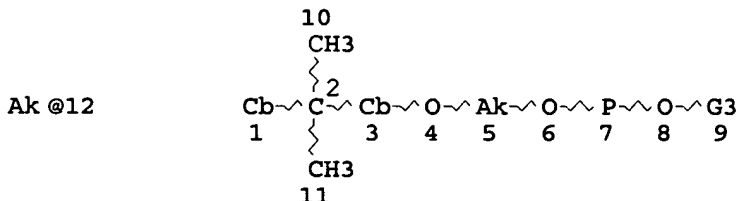
=> D QUE L18



REP G1=(0-1) O
 REP G2=(0-4) C
 VAR G3=12/ID
 NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 GGCAT IS UNS AT 1
 GGCAT IS UNS AT 3
 DEFAULT ECLEVEL IS LIMITED
 ECOUNT IS M8 C AT 12

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE
 L7 132 SEA FILE=REGISTRY SSS FUL L5
 L11 STR



VAR G3=12/ID
 NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 GGCAT IS UNS AT 1
 GGCAT IS UNS AT 3
 DEFAULT ECLEVEL IS LIMITED
 ECOUNT IS M8 C AT 12

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE
 L14 20 SEA FILE=REGISTRY SUB=L7 SSS FUL L11
 L15 18 SEA FILE=REGISTRY ABB=ON L14 AND PMS/CI
 L16 2 SEA FILE=REGISTRY ABB=ON L14 NOT L15
 L18 1 SEA FILE=HCAPLUS ABB=ON L16

=> D L18 IBIB ABS IND HITSTR

*132 structures from
 this query
 covers claim 1 or claim 7*

*Subset search
 for claim 4 compounds*

*20 structures - 18 are polymers
 and not good
 answers*

Only 2 structures

1 CA reference

L18 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:759855 HCAPLUS

DOCUMENT NUMBER: 141:261515

TITLE: Reducing phenol emissions in polymers using phosphites

INVENTOR(S): Stevenson, Donald R.; Nguyen, Duong N.; Harr, Mark E.; Jakupca, Michael R.

PATENT ASSIGNEE(S): Dover Chemical Corporation, USA

SOURCE: U.S. Pat. Appl. Publ., 20 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004180999	A1	20040916	US 2004-709578	20040514
WO 2005113665	A2	20051201	WO 2005-US15331	20050503
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

PRIORITY APPLN. INFO.: US 2004-709578 A 20040514

OTHER SOURCE(S): MARPAT 141:261515

AB A process for reducing phenol emissions from a polymer resin comprises adding at least one specified phosphite additive (e.g., ethoxy-p-cumylphenyl diisodecyl phosphite) to the resin (e.g., PVC). These phosphites utilize p-cumyl phenol-based derivs. in order to provide a phenol free derivative of the above mentioned conventional phosphites.

IC ICM C08K005-49

INCL 524115000

CC 37-6 (Plastics Manufacture and Processing)

ST phenol emission redn polymer phosphite additive

IT 457898-48-5 756522-31-3 756522-33-5 756522-35-7

RL: MOA (Modifier or additive use); USES (Uses)
(reducing phenol emissions in polymers using phosphites)

IT 9002-86-2, Polyvinyl chloride

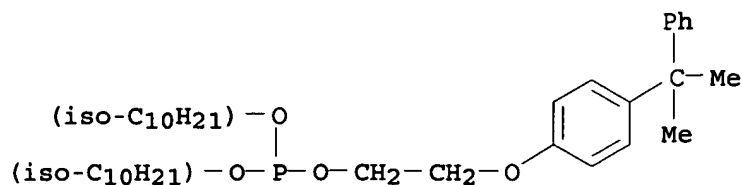
RL: POF (Polymer in formulation); USES (Uses)
(reducing phenol emissions in polymers using phosphites)

IT 756522-31-3 756522-33-5

RL: MOA (Modifier or additive use); USES (Uses)
(reducing phenol emissions in polymers using phosphites)

RN 756522-31-3 HCAPLUS

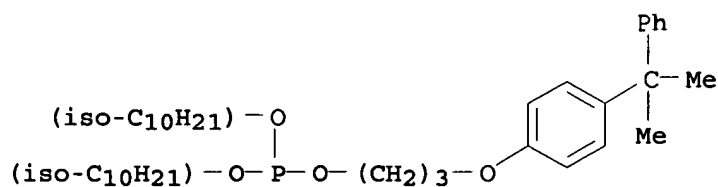
CN Phosphorous acid, diisodecyl 2-[4-(1-methyl-1-phenylethyl)phenoxy]ethyl ester (9CI) (CA INDEX NAME)



← Claim 4

RN 756522-33-5 HCAPLUS

CN Phosphorous acid, diisodecyl 3-[4-(1-methyl-1-phenylethyl)phenoxy]propyl ester (9CI) (CA INDEX NAME)



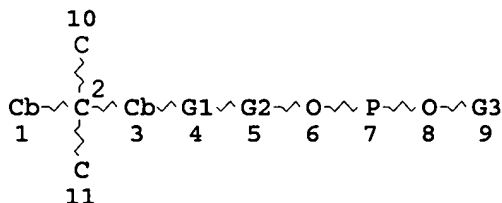
← Claim 4

no other references to these compounds

=> => D QUE
L5

STR

Ak @12



Broad structure search
Combined with
utility

REP G1=(0-1) O

REP G2=(0-4) C

VAR G3=12/ID

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 1

GGCAT IS UNS AT 3

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M8 C AT 12

GRAPH ATTRIBUTES:

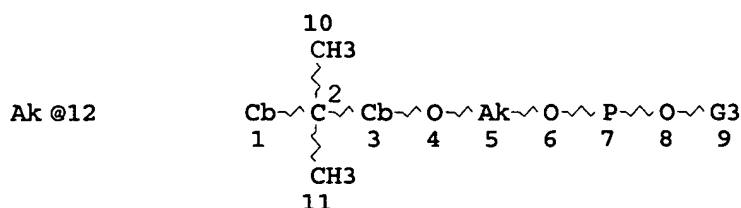
RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE

L7 132 SEA FILE=REGISTRY SSS FUL L5

L11 STR



VAR G3=12/ID

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 1

GGCAT IS UNS AT 3

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M8 C AT 12

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE

L14 20 SEA FILE=REGISTRY SUB=L7 SSS FUL L11

L15 18 SEA FILE=REGISTRY ABB=ON L14 AND PMS/CI

L19 16 SEA FILE=HCAPLUS ABB=ON L15

L24 9192 SEA FILE=HCAPLUS ABB=ON PHENOL? (3A) (EMISS? OR REDUC? OR FREE)

L25 0 SEA FILE=HCAPLUS ABB=ON L19 AND L24

L28 323 SEA FILE=HCAPLUS ABB=ON L7

L29 3 SEA FILE=HCAPLUS ABB=ON L28 AND L24

L34 3 SEA FILE=HCAPLUS ABB=ON L25 OR L29

3 CA references

=> D L34 IBIB ABS IND HITSTR 1-3

L34 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:759855 HCAPLUS

DOCUMENT NUMBER: 141:261515

TITLE: **Reducing phenol emissions**

in polymers using phosphites

INVENTOR(S): Stevenson, Donald R.; Nguyen, Duong N.; Harr, Mark E.; Jakupca, Michael R.

PATENT ASSIGNEE(S): Dover Chemical Corporation, USA

SOURCE: U.S. Pat. Appl. Publ., 20 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

applicant

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004180999	A1	20040916	US 2004-709578	20040514
WO 2005113665	A2	20051201	WO 2005-US15331	20050503

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL,

SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

US 2004-709578

A 20040514

OTHER SOURCE(S): MARPAT 141:261515

AB A process for **reducing phenol emissions** from a polymer resin comprises adding at least one specified phosphite additive (e.g., ethoxy-p-cumylphenyl diisodecyl phosphite) to the resin (e.g., PVC). These phosphites utilize p-cumyl phenol-based derivs. in order to provide a **phenol free** derivative of the above mentioned conventional phosphites.

IC ICM C08K005-49

INCL 524115000

CC 37-6 (Plastics Manufacture and Processing)

ST **phenol emission redn** polymer phosphite additive

IT 457898-48-5 756522-31-3 756522-33-5
756522-35-7

RL: MOA (Modifier or additive use); USES (Uses)
(**reducing phenol emissions** in polymers using phosphites)

IT 9002-86-2, Polyvinyl chloride

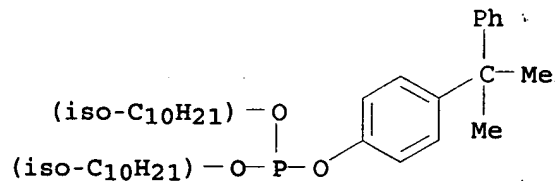
RL: POF (Polymer in formulation); USES (Uses)
(**reducing phenol emissions** in polymers using phosphites)

IT 457898-48-5 756522-31-3 756522-33-5
756522-35-7

RL: MOA (Modifier or additive use); USES (Uses)
(**reducing phenol emissions** in polymers using phosphites)

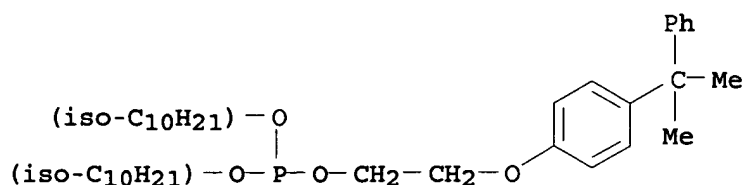
RN 457898-48-5 HCAPLUS

CN Phosphorous acid, diisodecyl 4-(1-methyl-1-phenylethyl)phenyl ester (9CI)
(CA INDEX NAME)



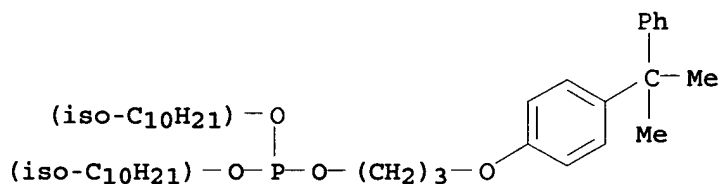
RN 756522-31-3 HCAPLUS

CN Phosphorous acid, diisodecyl 2-[4-(1-methyl-1-phenylethyl)phenoxy]ethyl ester (9CI) (CA INDEX NAME)



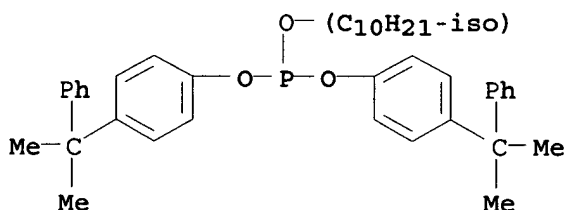
RN 756522-33-5 HCAPLUS

CN Phosphorous acid, diisodecyl 3-[4-(1-methyl-1-phenylethyl)phenoxy]propyl ester (9CI) (CA INDEX NAME)



RN 756522-35-7 HCAPLUS

CN Phosphorous acid, isodecyl bis[4-(1-methyl-1-phenylethyl)phenyl] ester (9CI) (CA INDEX NAME)



L34 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:658216 HCAPLUS

DOCUMENT NUMBER: 133:224001

TITLE: Halogen-free flame-retardant adhesives for manufacture of printed circuit boards

INVENTOR(S): Ito, Toshihiko; Tanaka, Masaru; Hirayama, Takao

PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000256633	A2	20000919	JP 1999-61516	19990309
PRIORITY APPLN. INFO.:			JP 1999-61516	19990309

AB The adhesives, showing good resistance to heat and electrolytic corrosion, comprise (A) copolymers prepared from nitrile-containing monomers, epoxy-containing

monomers, and other comonomers 70-90, (B) epoxy resins 7-20, and (C) hardeners or hardening catalysts 3-10 parts and contain N compds. (based on 100 parts of A-B-C total) (D) 20-40 parts, (E) P compds. 20-40 parts, and (F) crystal water. The copolymer A may comprise acrylonitrile 15-35, glycidyl (meth)acrylate 0.5-4, and other comonomers 61-84.5%. Thus, 533 parts 2:15:30:53 (%) glycidyl methacrylate-acrylonitrile-Bu acrylate-Et acrylate copolymer was blended with bisphenol A epoxy resin (Epikote 828) 15, cresol novolak epoxy resin (Epo Tohto YDCN 703) 5, a phenolic resin (Plyophen LF 2822) 8, Al2O3 (Higilite H 42STE) 85, biphenyl-type phosphoric acid ester (CR 747) 30, melamine resin (Melan 523) 10, a melamine-phenol resin 15, and an imidazol-type hardening accelerator (Curezol 2PZCN) 0.2 part to give a varnish, which was applied on a polyimide film, dried, and laminated with a Cu foil to give a specimen showing 180° peeling strength 1.2 KN/m, solder heat resistance 330°, and UL 94 fire resistance rating V0.

IC ICM C09J133-18

ICS C09J011-04; C09J011-06; C09J133-14; C09J161-34; C09J163-00

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 76

ST nitrile polymer blend nonhalogen fireproofed adhesive; epoxy resin adhesive phosphate blend fireproofed; melamine resin blend fireproofed adhesive; electrolytic corrosion heat resistant adhesive; printed circuit board nonhalogen adhesive

IT Phenolic resins, uses

Phenolic resins, uses

RL: MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(aminoplast-, fireproofing agents; halogen-free epoxy resin adhesives

containing N compds. and P compds. for printed circuit board manufacture)

IT Phenolic resins, uses

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP

(Properties); TEM (Technical or engineered material use); PREP

(Preparation); USES (Uses)

(epoxy, novolak, cresol-novolak; halogen-free epoxy resin adhesives

containing N compds. and P compds. for printed circuit board manufacture)

IT Aminoplasts

RL: MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(fireproofing agents; halogen-free epoxy resin adhesives containing N compds. and P compds. for printed circuit board manufacture)

IT Fireproofing agents

Printed circuit boards

Semiconductor device fabrication

(halogen-free epoxy resin adhesives containing N compds. and P compds. for printed circuit board manufacture)

IT Adhesives

(heat- and fire-resistant; halogen-free epoxy resin adhesives containing N compds. and P compds. for printed circuit board manufacture)

IT Aminoplasts

Aminoplasts

RL: MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(phenolic, fireproofing agents; halogen-free epoxy

resin adhesives containing N compds. and P compds. for printed circuit board manufacture)

IT Epoxy resins, uses

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP

(Properties); TEM (Technical or engineered material use); PREP

(Preparation); USES (Uses)

(phenolic, novolak, cresol-novolak; halogen-free epoxy resin adhesives

containing N compds. and P compds. for printed circuit board manufacture)

IT 9003-08-1, Melan 523 23996-12-5, Curezol 2PZCN 93981-32-9, CR 747

RL: MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(fireproofing agents; halogen-free epoxy resin adhesives containing N compds. and P compds. for printed circuit board manufacture)

IT 25068-38-6P, Epikote 828 58152-79-7P, Acrylonitrile-butyl acrylate-ethyl acrylate-glycidyl methacrylate copolymer 101706-82-5P, Epo Tohto YDCN 703 206566-37-2P, Plyophen LF 2822 292145-57-4P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(halogen-free epoxy resin adhesives containing N compds. and P compds. for printed circuit board manufacture)

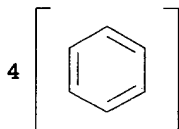
IT 93981-32-9, CR 747

RL: MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

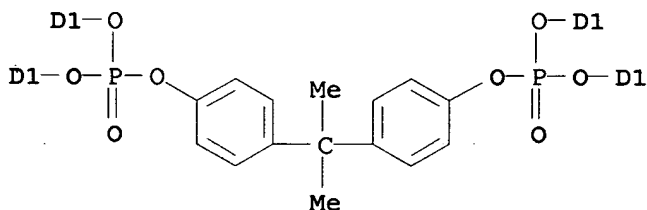
(fireproofing agents; halogen-free epoxy resin adhesives containing N compds. and P compds. for printed circuit board manufacture)

RN 93981-32-9 HCAPLUS

CN Phosphoric acid, (1-methylethylidene)di-4,1-phenylene tetrakis(methylphenyl) ester (9CI) (CA INDEX NAME)



4 (D1-- Me)



L34 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:382520 HCAPLUS

DOCUMENT NUMBER: 125:35058

TITLE: Halo-free fire-resistant thermoplastic resin compositions

INVENTOR(S): Matsubara, Kazuhiro; Katsumata, Tsutomu

PATENT ASSIGNEE(S): Asahi Chemical Ind, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

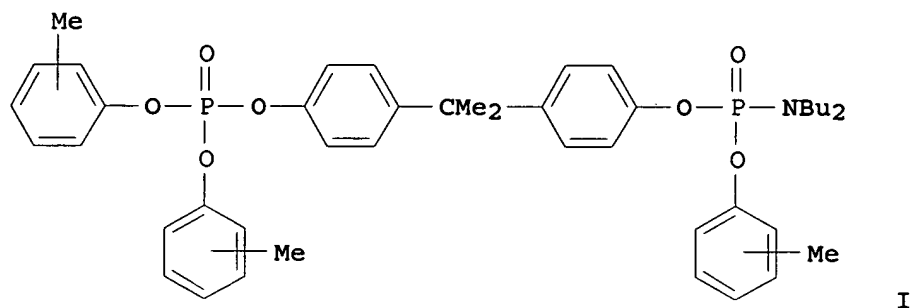
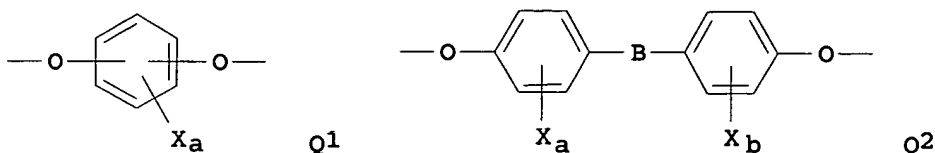
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

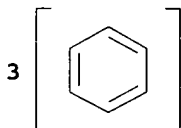
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08059888	A2	19960305	JP 1994-192587	19940816
PRIORITY APPLN. INFO.:			JP 1994-192587	19940816
OTHER SOURCE(S):	MARPAT	125:35058		

GI

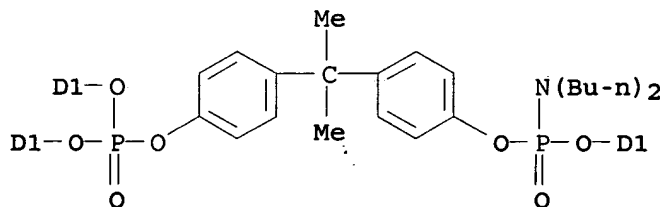


- AB The compns. comprise synthetic resins and $R_1R_2P(O)[AP(O)R_3]_nR_4$ [$n = 1-100$; $R_1-4 = NR_5R_6$, OAr; $R_5, R_6 = H$, C1-10 alkyl, alkenyl, cycloalkyl, $PhCH_2$, Ph, C1-3-alkyl-substituted aryl; $A = Q_1, Q_2$; $X = \text{halo}$; $a, b = 0-4$; $B = SO_2$, C1-4 alkylidene, alkylene] containing $\geq 3\%$ P and $\geq 0.1\%$ N. Thus, poly(2,6-dimethyl-1,4-phenylene ether) 50, high-impact polystyrene 50, poly(tetrafluoroethylene) 0.1, and a phosphate ester (I) 20 parts were melt-kneaded, pelletized, and injection-molded to give a test piece showing good fire resistance.
- IC ICM C08K005-5399
ICS C08L101-00
- CC 37-6 (Plastics Manufacture and Processing)
- ST fire resistance thermoplastic halo free; amide phosphate fire retardant thermoplastic blend
- IT Fireproofing agents
(halo-free fire-resistant thermoplastic resin compns. containing phosphate amide fire retardants)
- IT Fluoropolymers
Plastics
Polycarbonates, properties
Polyoxyarylenes
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(halo-free fire-resistant thermoplastic resin compns. containing phosphate amide fire retardants)
- IT 177190-05-5P 177996-35-9P 178066-89-2P
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(fire retardant; halo-free fire-resistant thermoplastic resin compns.)

- containing phosphate amide fire retardants)
- IT 9002-84-0, Tetrafluoroethylene homopolymer 24938-67-8,
Poly(2,6-dimethyl-1,4-phenylene ether) 25134-01-4, 2,6-Xylenol
homopolymer
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(halo-free fire-resistant thermoplastic resin compns. containing phosphate
amide fire retardants)
- IT 80-05-7, reactions 100-61-8, reactions 108-46-3, Resorcinol, reactions
108-95-2, Phenol, reactions 111-92-2, Dibutylamine 122-39-4,
Diphenylamine, reactions 1319-77-3, Cresol 10025-87-3, Phosphorus
oxychloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(halo-free fire-resistant thermoplastic resin compns. containing
phosphate amide fire retardants)
- IT 100-42-5D, polymers
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(high-impact; halo-free fire-resistant thermoplastic resin compns.
containing phosphate amide fire retardants)
- IT 178066-89-2P
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP
(Preparation); USES (Uses)
(fire retardant; halo-free fire-resistant thermoplastic resin compns.
containing phosphate amide fire retardants)
- RN 178066-89-2 HCAPLUS
- CN Phosphoric acid, 4-[1-[4-[[[(dibutylamino)(methylphenoxy)phosphinyl]oxy]phe
nyl]-1-methylethyl]phenyl bis(methylphenyl) ester (9CI) (CA INDEX NAME)



3 (D1-Me)



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